

Claims

1. An exhaust treatment apparatus having a body through which the exhaust of an internal combustion engine can flow, which body has regions with different flow resistances, characterized in that the body has flow regions (4, 44) that are separate from one another and are each delimited by a delimiting device (2, 12, 14, 46) and each have at least one inflow opening (7) that the exhaust is able to act on and the different flow resistances in the regions (11, 13; 15, 16; 20, 21; 57, 58) are produced by differently embodied delimiting devices.
2. The exhaust treatment apparatus according to claim 1, characterized in that the delimiting devices are permeable to the exhaust and can retain soot particles contained in the exhaust.
3. The exhaust treatment apparatus according to claim 2, characterized in that the permeability of the delimiting devices varies.
4. The exhaust treatment apparatus according to claim 3, characterized in that the different permeabilities of the delimiting devices are at least partially determined by correspondingly selected thicknesses of the delimiting devices.
5. The exhaust treatment apparatus according to one of the preceding claims, characterized in that the delimiting devices each have a wall and, at least partially covering this wall, a coating (12, 14, 53) whose thickness varies.

6. The exhaust treatment apparatus according to claim 3 or 4, characterized in that the permeability of at least one delimiting device in a region (11; 15) of the delimiting device oriented toward the inflow opening differs from the permeability of the delimiting device in a region (13; 16) oriented away from the inflow opening.
7. The exhaust treatment apparatus according to claim 3, 4, or 6, characterized in that the permeabilities of at least two delimiting devices differ from each other.
8. The exhaust treatment apparatus according to one of claims 2, 3, 4, 6, or 7, characterized in that the delimiting devices are at least partially comprised of porous material and the different permeabilities of the delimiting devices are at least partially determined by correspondingly selected pore densities and/or pore sizes in the regions.
9. The exhaust treatment apparatus according to claim 7, characterized in that the permeabilities of at least two delimiting devices in regions close to the inflow openings and/or in regions remote from the inflow openings differ from each other.
10. The exhaust treatment apparatus according to one of the preceding claims, characterized in that the flow regions have cross-sectional areas perpendicular to the flow direction of the exhaust and the delimiting devices are embodied differently so that the geometric areas of the cross-sectional areas in the regions differ from one another.
11. The exhaust treatment apparatus according to one of the preceding claims, characterized in that there is a continuous transition between the regions of different flow resistances.

12. The exhaust treatment apparatus according to one of the preceding claims, characterized in that the flow-permeable body constitutes an oxidizing converter or a reservoir catalytic converter (30) for NOx-reduction of the exhaust.

13. The exhaust treatment apparatus according to one of the preceding claims, characterized in that the flow-permeable body constitutes a particle filter.

14. The exhaust treatment apparatus according to one of the preceding claims, characterized in that the delimiting devices are comprised of ceramic walls.

15. The exhaust treatment apparatus according to one of the preceding claims, characterized in that the delimiting devices are comprised of metal meshes.

16. The exhaust treatment apparatus according to claim 14, characterized in that the filter is a sintered metal filter.

17. The exhaust treatment apparatus according to one of the preceding claims, characterized in that the flow regions are disposed parallel to one another so that their inflow openings are situated on one side of the body.